

Install & Operation Manual

Dispense options

Chilled & Ambient
Chilled, Ambient & Sparkling
Chilled, Ambient & Hot
Chilled, Hot & Sparkling



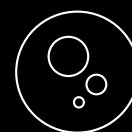
Chilled



Ambient



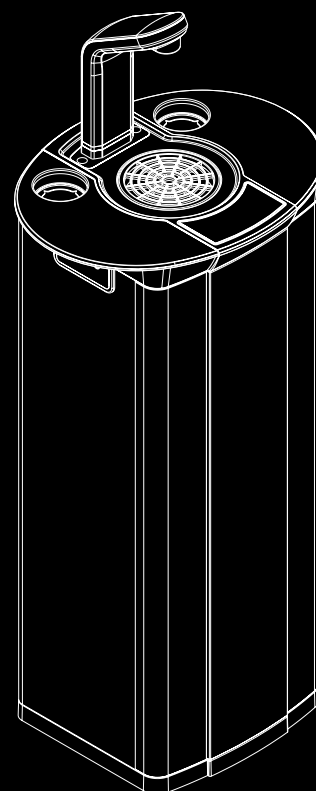
Hot



Sparkling

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Model Overview

Introduction

A range of compact water dispensers, available in four different operational types:

- Chilled & Ambient
- Chilled, Ambient & Sparkling
- Chilled, Ambient & Hot
- Chilled, Hot & Sparkling

All Models

All models are self-contained machines with robust steel framed cabinets and attractively injection moulded plastic front, side and top panels. There is sufficient space internally for most filters to be fitted behind the door panel. An IEC Power Lead is supplied for connection to the IEC socket found on the rear of all models (An additional Schuko type is supplied for the European market).

The level control system also incorporates a leak detection device within the cabinet which isolates the water to the unit in the event of detecting a water leak.

Chilled

The cold temperature is thermostatically controlled via the adjustment screw on the back of the machine. This is factory set and is not necessary to adjust in most cases (see Controls).

Ambient

Water bypasses the cold tank for the ambient dispense option.

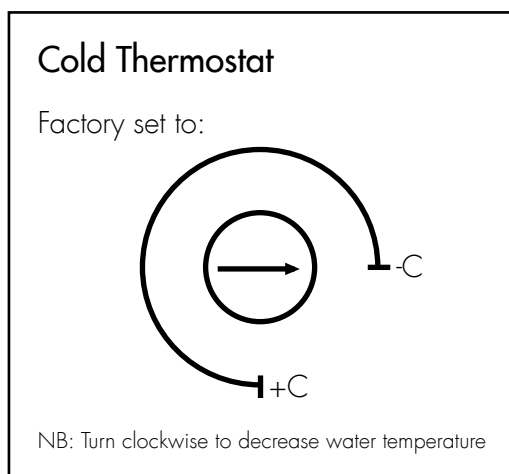
Sparkling

Water is chilled as it passes through the coil immediately before dispense or being pumped under pressure into the carbonator which it fitted inside the same coil. The carbonator is also level controlled and allows the sparkling effect to occur through saturation with CO₂.

Hot

The hot water is provided by hot water tank with an integrated heater element. The water is supplied directly into the tank under the pressure as connected into the back of the unit. The water fills the tank and hot water is dispensed. The water flow is controlled by a solenoid.

Controls



Chilled

On/Off Switch: at upper rear of machine, switches cooling operation on/off.

Cold Thermostat: at rear of machine.

Cold Button: press to dispense cold water.

Green LED (Top): Colours to show cooling operation is switched on.

Green LED (Bottom): Colours to show when compressor is operating/water is above set point.

10A Fuse: On rear of machine, integral with IEC socket.

Ambient

Ambient Button: Press to dispense ambient water.

Sparkling

Soda: Switches sparkling operation on/off.

Sparkling Button: Press to dispense sparkling water.

Yellow LED (bottom RH): Colours to show the sparkling operation is switched on.

Hot

On/Off Switch: The hot water heating mode is controlled by a switch on the back of the unit, next to the cooling mode switch. This switch is labelled "Hot".

Hot Thermostat: regulated by a pre-set, non-adjustable sensor on the tank.

Hot Button: press to dispense hot water.

Lock Button: toggles on and off the dispense of hot water.

Red LED (on hot water icon): Colours to show heating mode is enabled.

Red LED (marked heating): Colours to show heating element is active according to thermostatic demand.

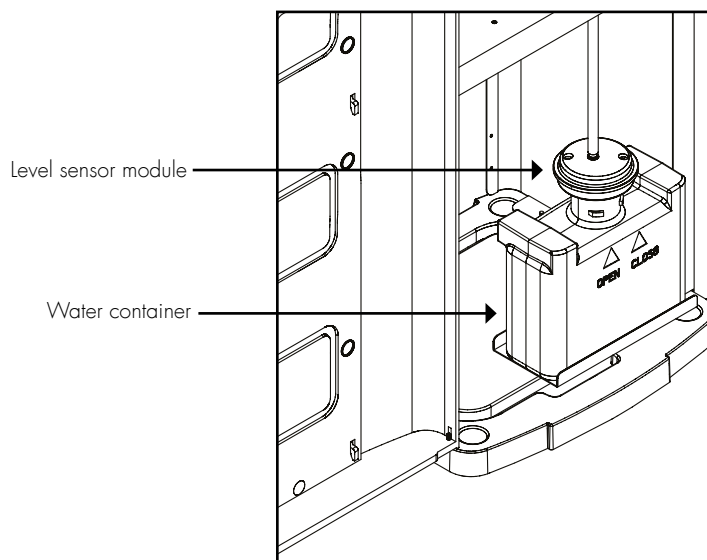
Storage Cabinet

All models are fitted with a lower storage area.

The door panel is hinged and fastened with magnetic catches. There is a removable cover protecting the machine parts.

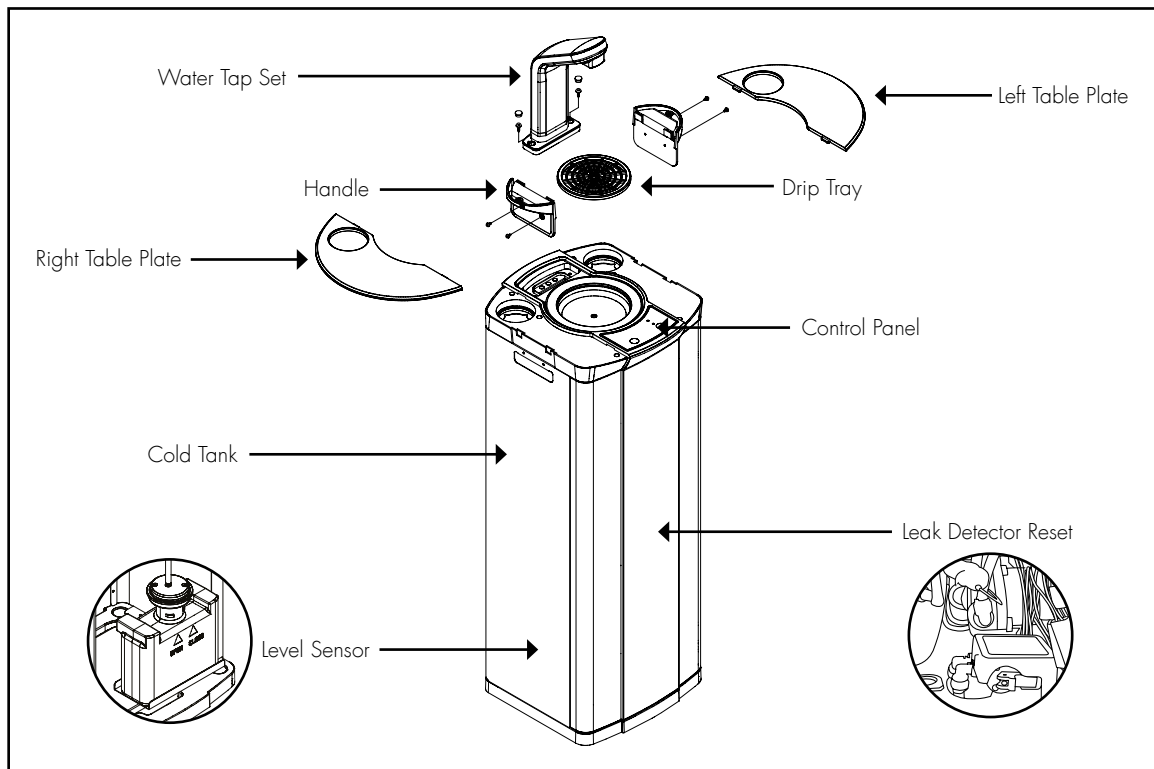
Every DC15 is supplied with a level sensor kit, comprising:

- Water container
- Level sensor module

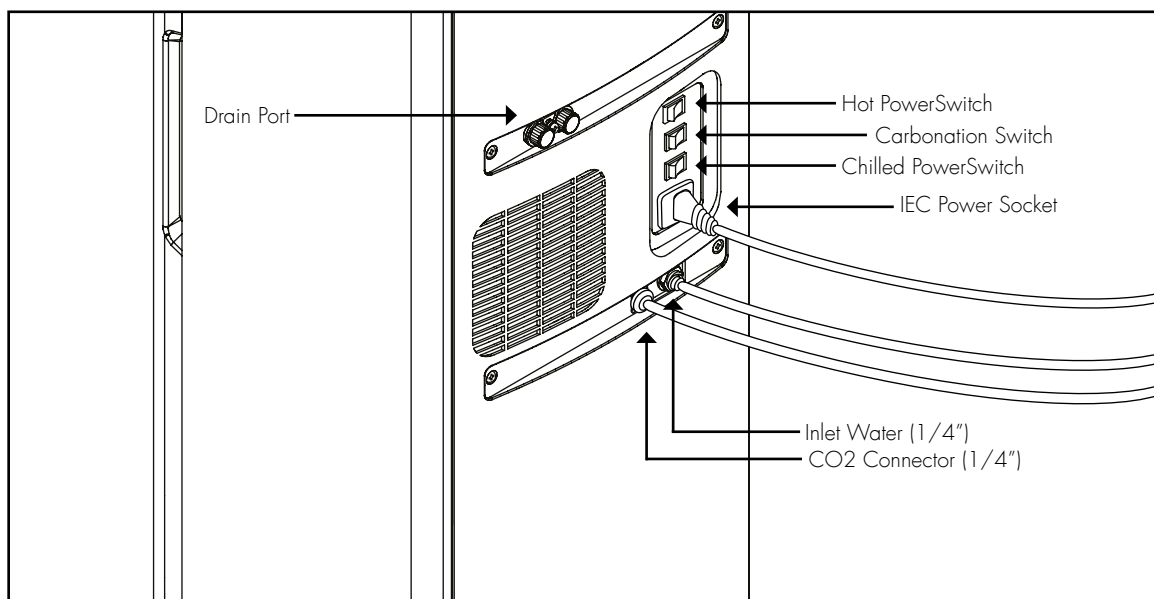


Installation

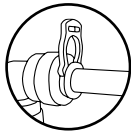
Major Components



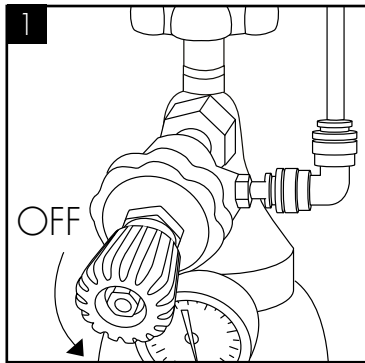
Water & CO2 Connection



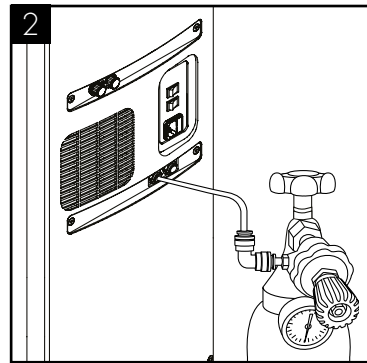
CO2 Bottle Installation (Sparkling Versions Only)



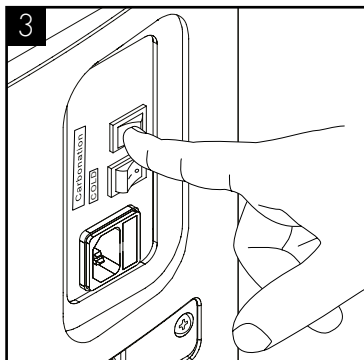
IMPORTANT! ALWAYS ENSURE SECURITY CLIPS ARE USED ON ALL WATER AND CO2 CONNECTIONS.



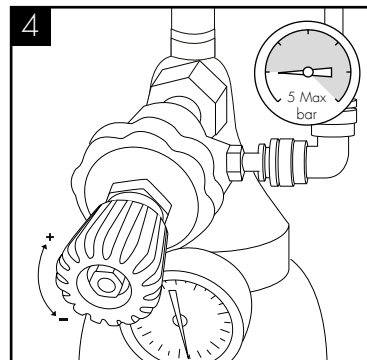
1 Attach the regulator to the disposable CO2 bottle, ensuring the regulator is closed.



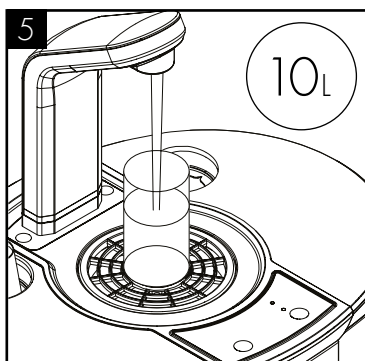
2 Connect the assembled CO2 bottle and regulator to the machine using 1/4 inch pipe.



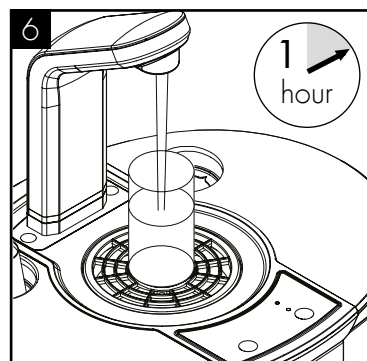
3 After completing the water installation, turn on the soda power switch and the pump will run. Do not open the regulator valve until the carbonated switch has been turned on.



4 We recommend between 3.5 - 5 bar. Do not exceed 5 bar pressure.

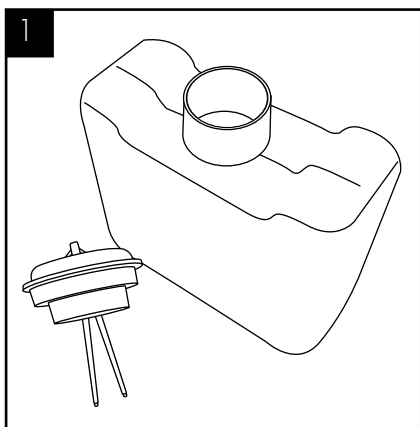


5 Flush through approximately 10 litres of water. Check and adjust the CO2 pressure accordingly.

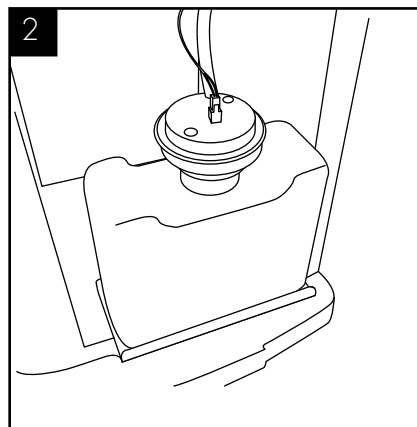


6 It will be necessary to leave the machine for up to 1 hour for sparkling water to develop, by absorbing the CO2.

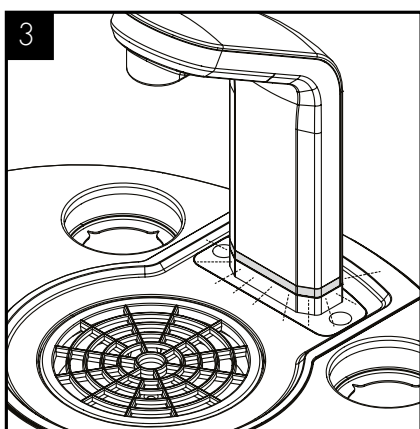
Level Sensor Assembly



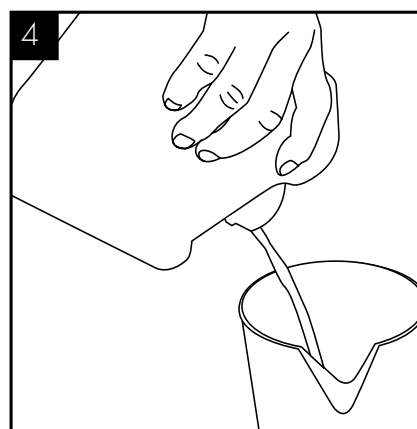
Check all parts are present.



Locate and connect the drainage tubing into the top of the level sensor connector.



The LED lighting at the base of the faucet will flash slowly for 1 minute. This is also repeated every time a dispense button is pressed.

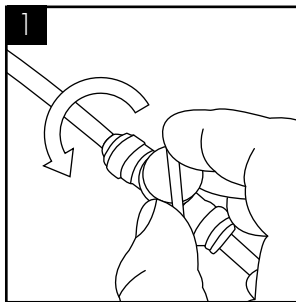


Empty the waste container to cancel.

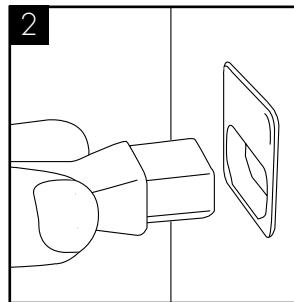
A WARNING TONE WILL SOUND WHEN THE WATER RISES. UPON EMPTYING THE CONTAINER THE WARNING TONE WILL STOP.

Operation

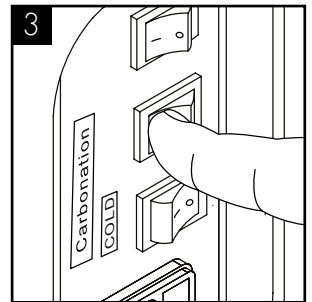
Water Connection & Operation



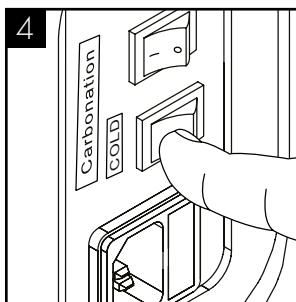
1
Connect and turn on the water supply.



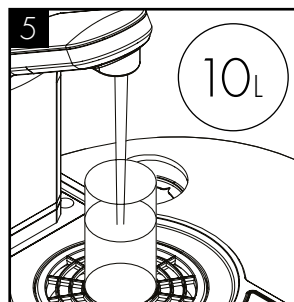
2
Plug in the power supply, cold, hot & sparkling tanks will automatically fill.



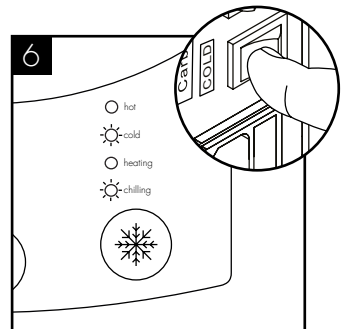
3
Activate the carbonation & hot power switch (if present).



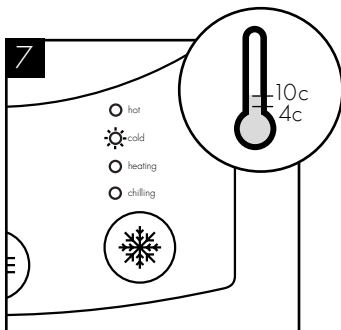
4
Activate cold power switch.



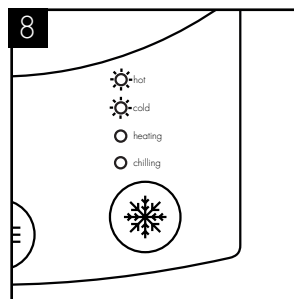
5
Flush through 10 litres of water before use.



6
When the cold water switch is turned on, the cold water and chilling LED will be on.

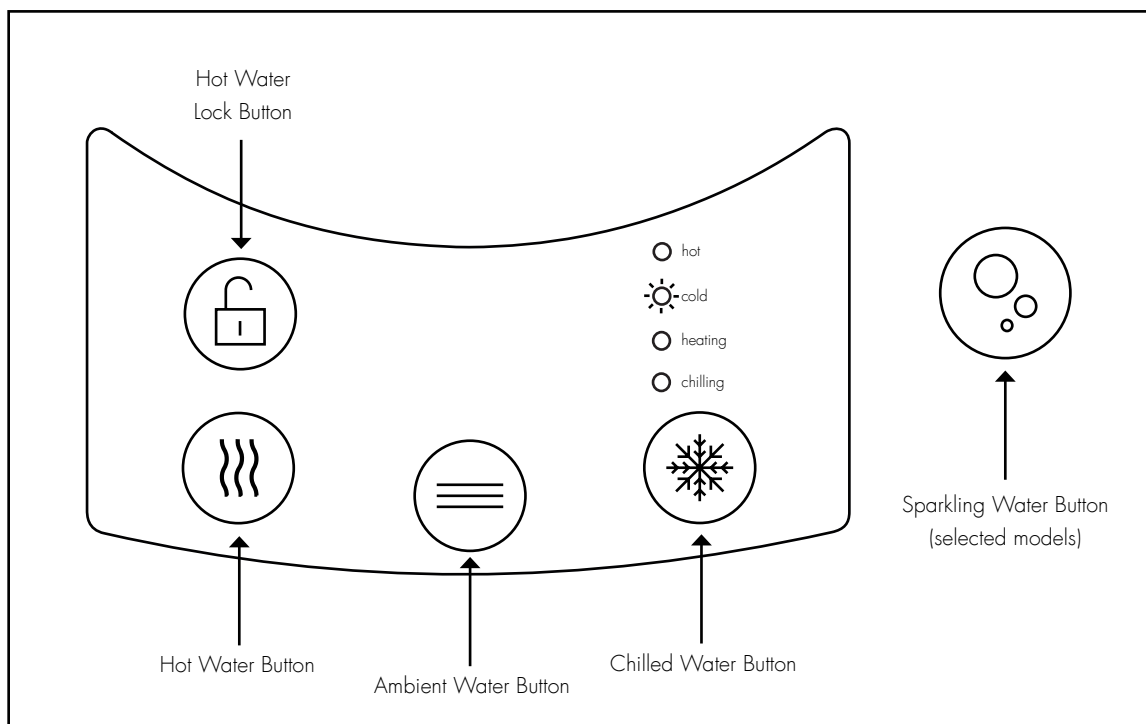


7
The temperature of cold water can be set from 4c to 10c. When the chilling LED is off the set temperature has been reached. This can take up to one hour.

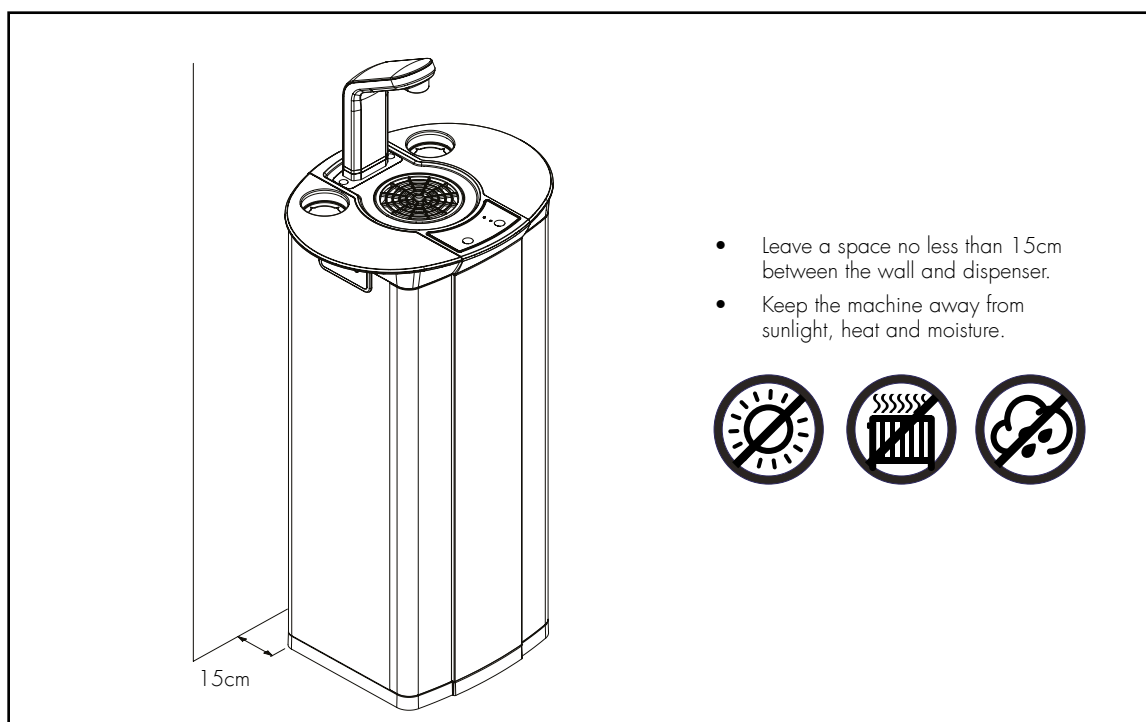


8
When the heating LED is off the pre-set temperature has been reached. This can take up to 30mins.

Functions & Controls

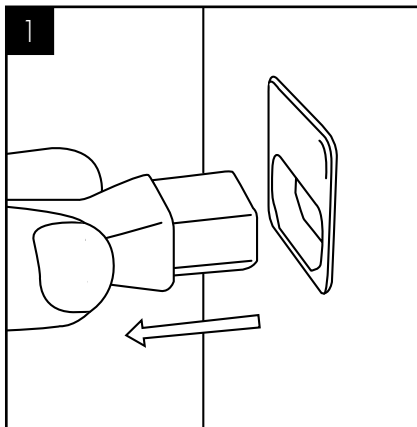


General Safety

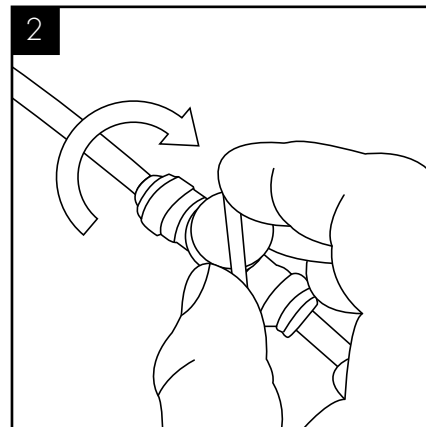


Maintenance

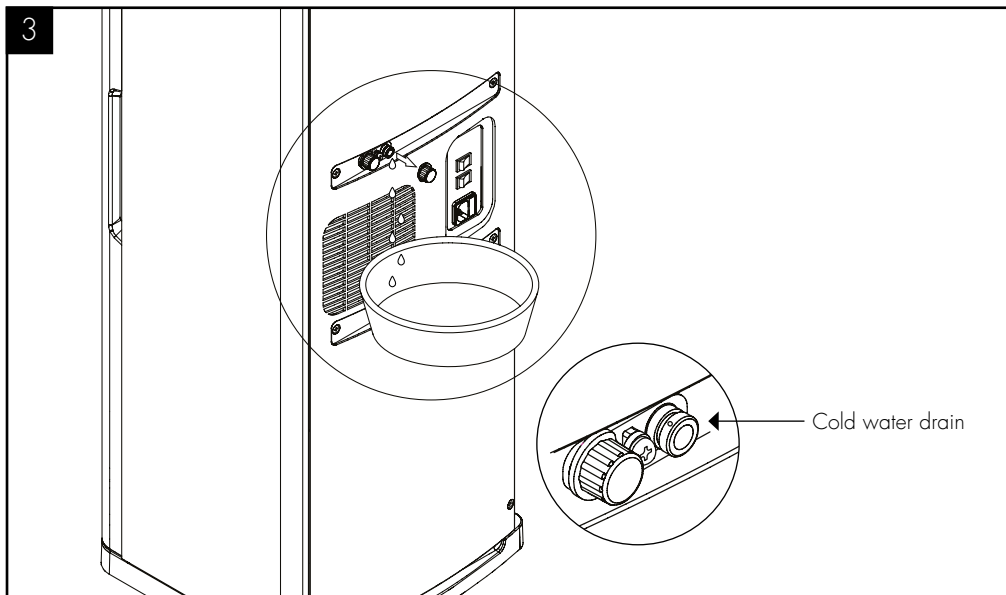
Isolation & Removal



Please make sure the machine is completely disconnected from electricity before carrying out any maintenance work.



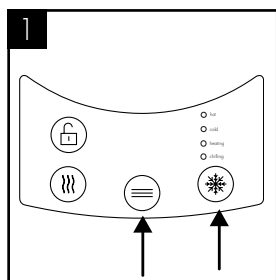
Turn off the water supply.



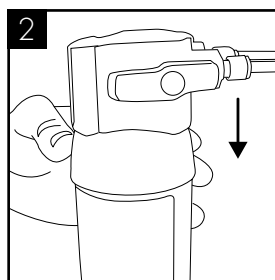
To drain the Direct Chill tank, remove the cap on the back of the machine. We recommend it is refitted immediately upon draining being completed.

Sanitisation Guide

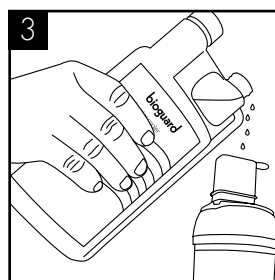
NOTE: Before beginning the sanitation process please ensure that water is turned off at the mains and refer to the MSDS document for further information. Use bioguard hand gel and ensure gloves are worn.



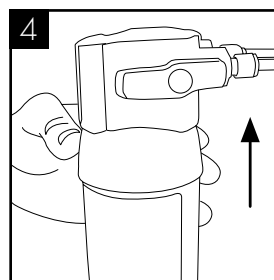
Briefly press cold/ambient dispense button to release internal water pressure from the machine.



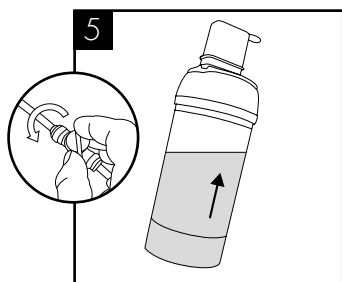
Remove the existing filter.



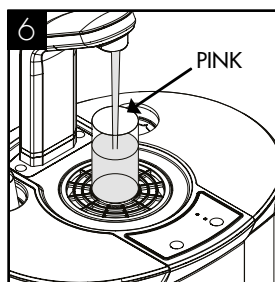
Add 25 ml of Bioguard Internal Sanitisation fluid to a clean and empty service filter cartridge.



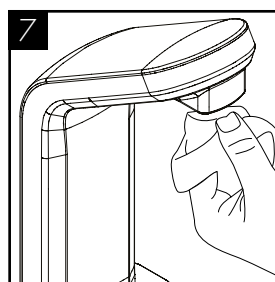
Connect to machine.



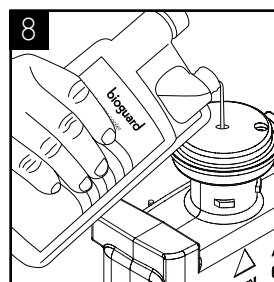
Turn on incoming water, allow service cartridge/doser to fill.



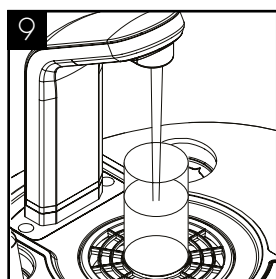
Dispense water using the cold button until the water appears pink. Briefly press the ambient button too. Repeat with sparkling button if present.



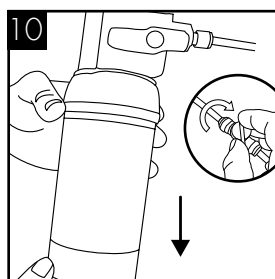
Leave the solution inside machine for sanitisation to take effect (minimum 5 minutes) while thoroughly cleaning the machine externally, pay particular attention to the dispense faucet and button controls.



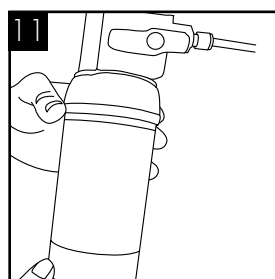
Remember to include the drip tray. Empty the Waste Overflow System and flush through with a small amount of sanitisation fluid if needed.



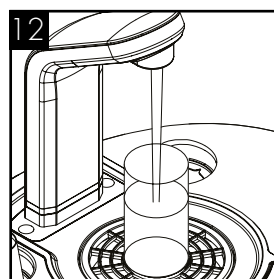
When the external cleaning (minimum 5 minutes) is completed, flush the machine using the cold button with clean water until the dispense water runs clear. Repeat briefly with the ambient button (and sparkling button if present).



Turn off water and remove the service filter. Retain service filter for reuse.



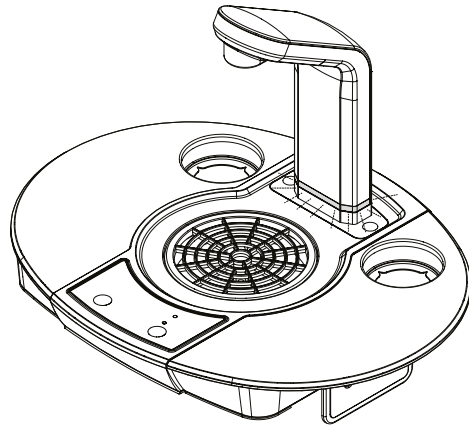
Fit new filter. Turn on incoming water supply.



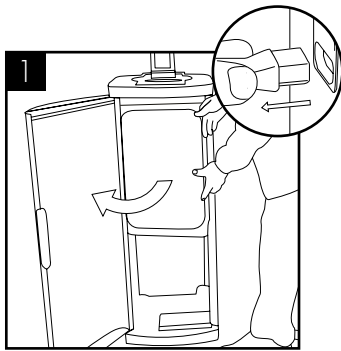
Pre-flush the new filter to waste using the ambient button (and sparkling button if present) until the water appears clear and is free of air. Flush through a small amount of water to check all functions.

Leak Detection

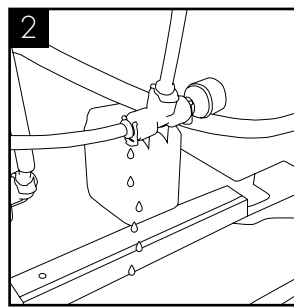
NOTE: This machine is equipped with a leakage detection device. When leaking is detected, the dispense operation will be cut off automatically. This is indicated by a blue LED flashing at the base of the tap.



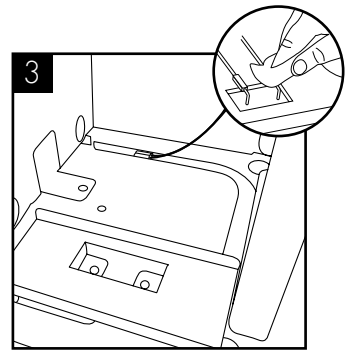
To reset:



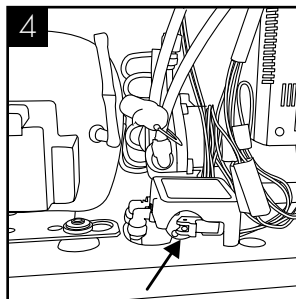
1 Unplug the machine and remove the protective cover.



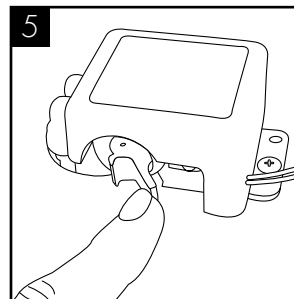
2 Locate the source of leakage and rectify.



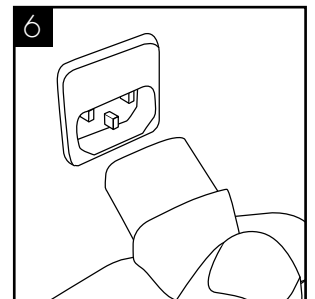
3 Locate the detection probe which can be found in the bottom at the rear of the machine. Dry the probes and internal area with a dry cloth.



4 Locate the Leak Detector valve.

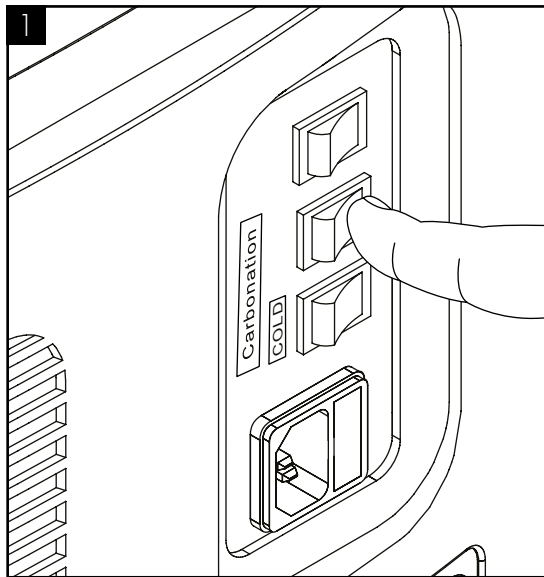


5 Reset the red lever (push it in).

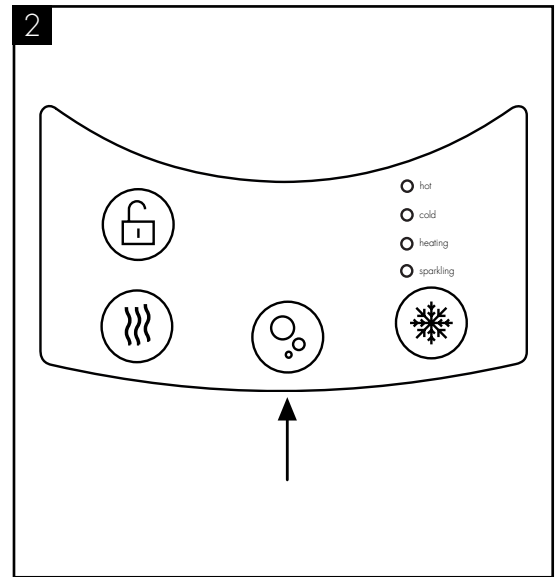


6 Reconnect the power to machine and test operation.

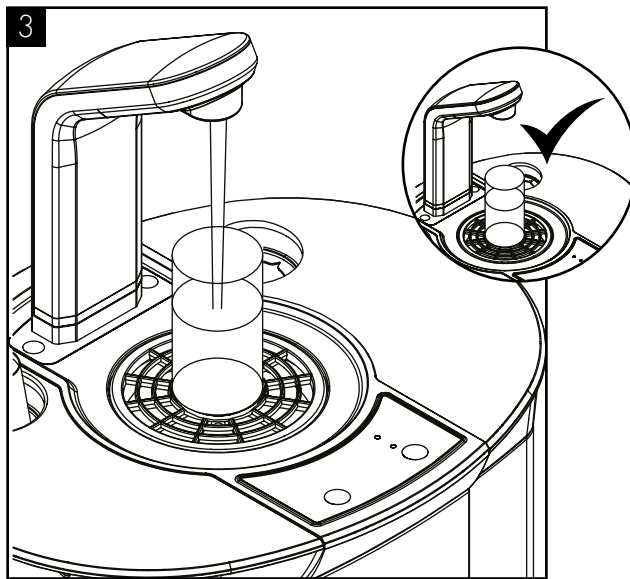
Emptying the Carbonation Tank



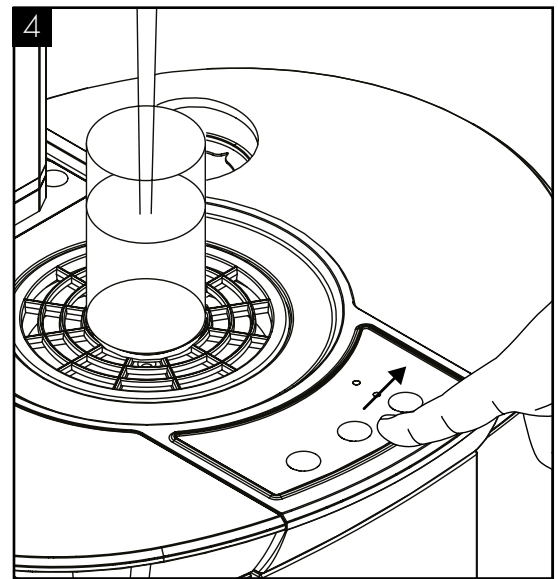
Switch off the Carbonation System switch on the back of the unit.



Press and hold the Sparkling water dispense button until all water is expelled.



The tank is empty of sparkling water when only CO₂ is being released.



Ensure to release the Sparkling water button and take care to avoid releasing excess amounts of CO₂ gas.

Advanced Troubleshooting

Fault Diagnosis: No Water Dispenses

Problem/Report	Possible Cause	Suggested Action
From Ambient Valve	Water Supply turned off.	Check all taps/valves/ filters on incoming supply are fitted and are turned on.
	No Electricity/Power Supply.	Check power cord is connected and live and machine is switched on.
	"Waterblock" tripped off (and tank empty).	Reset the "Waterblock" (refer to manufacturer's instructions and check for any leaks).
		Check valve action. Carefully dismantle valve and clean out/ part replace/complete replace as needed.
	Solenoid Valve not working.	Valve clicking but no water - Check if hole in centre of washer is clear.
		Valve not clicking - Check for voltage output from control PCB when operated (Caution-High Voltage). If not present, check wiring for continuity and/or replace PCB. If present, check coil/PCB and replace solenoid coil/whole valve coil/whole valve assembly complete/PCB as needed.
	"Level Sensor" Waste Water Container full (Blue LED will flash slowly when the button is pressed. This flashing cycle will repeat for 60 secs following the button being pressed).	Empty the container. (The unit will automatically reset to normal operation.)
From Cold Valve	Leak detector has disabled dispense operation.	Check for internal leakage, ensure probes are dry and reset.
	Firstly all as for Ambient Tap.	Carry out checks and actions as for ambient tap.
	Chiller tank frozen. Thermostat not working correctly.	Thaw out and check thermostat. Replace Cold Water thermostat as needed.
	Chiller tank Frozen tank. Pump not working correctly.	Thaw out and check tank pump. Replace pump and or check electricity supply to pump present.

Problem/Report	Possible Cause	Suggested Action
From All Valves	Button not being pressed enough.	Press button firmly.
	PCB control not working.	Check & replace as necessary.
From Sparkling Valve	Firstly as for ambient and cold valve.	Carry out the checks and actions as for cold and ambient.
	Low or no CO ₂ .	Check and replace cylinder as necessary.
	Pump not operating.	Check carbonator level control system.
		Check probes connected/Leads attached. Check power supply to pump.
	Carbonator Tank over pressurised with CO ₂ .	1. Switch the Sparkling System off. 2. Shut off CO ₂ supply. 3. Press the Sparkling Water button to release CO ₂ from carbonator. 4. Switch the Sparkling system on. 5. Check pump operation is running normally. 6. Wait for the pump to stop running. 7. Re-open CO ₂ supply.
	Pump Feed Solenoid Valve.	Check function/condition and repair/replace accordingly.
	Carbonation System switched off.	Switch on (Switch on back of the machine).
From Hot Valve	Hot water lock button not being pressed.	Press hot water lock button prior to hot water button.
	If during first installation: Ensure that the hot tank has filled. This fills automatically upon first installation – allow 2-3 mins.	Check and follow installation instructions.
	If following normal usage: Follow the same guidance as for 'Ambient' valve.	Carry out checks.
	Hot Tank Level Probes disconnected.	Check and rectify, as necessary.
	Hot Tank Level Probes have limescale build-up/damage.	Check and clean/replace, as necessary.
	Hot Tank Level Control Failed.	Replace Hot Tank Level Control Board.
	Hot Tank has excessive limescale build-up.	Check & Replace Hot Tank as necessary.
	Hot Safety dispense function not working.	Check & replace Main Control Board as necessary
	Hot Tank Solenoid (fill solenoid) failed.	Check & Replace as necessary.
	Hot Water Dispense Pump failed. Hot Water dispense pipe blocked.	

Fault Diagnosis: Water Dispenses but not Correct Temperature

Problem/Report	Possible Cause	Suggested Action
Ambient Water too Warm	Low usage and/or fed from water supply pipe in warm ducting.	Advise user replacing external causes and solutions.
Cold Water not Cold	Cooling switched off.	Check switch positions.
	Compressor runs and switching off (cool/warm to touch) - Thermostat set too high.	Decrease Cold Thermostat set point.
	Thermostat not working.	Check and replace as necessary
	Compressor runs but not switching off.	Please contact technical support.
	Refrigeration problem.	Please contact technical support.
	Compressor not running at all.	Check and trace voltage path. Check windings resistance.
	No electricity power supply.	Check the Power cord is connected, live and the machine is switched on.
	Compressor only hums slightly/briefly.	Check and replace relays.
	Relays loose.	Check and refit relays.
	Compressor not working.	Please contact technical support.
	DC Tank empty.	Check water level and replace level sensor in fill valve as needed.
	Fan not working.	Check and replace, as necessary.
Hot Water not Hot	Hot water mode switched off.	Switch on hot water mode.
	Heating cycle incomplete.	Wait for heating LED to stop showing.
	Hot water demand too high.	Advise user/s.
	hot thermostat not working.	Replace thermostat.
	Over heat function active (Heating mode LED not showing while heating mode switch on).	Reset switch on overheat temperature sensor.
	Hot Water Heater not working.	Replace Hot Water Tank.

Fault Diagnosis: Water Leaks

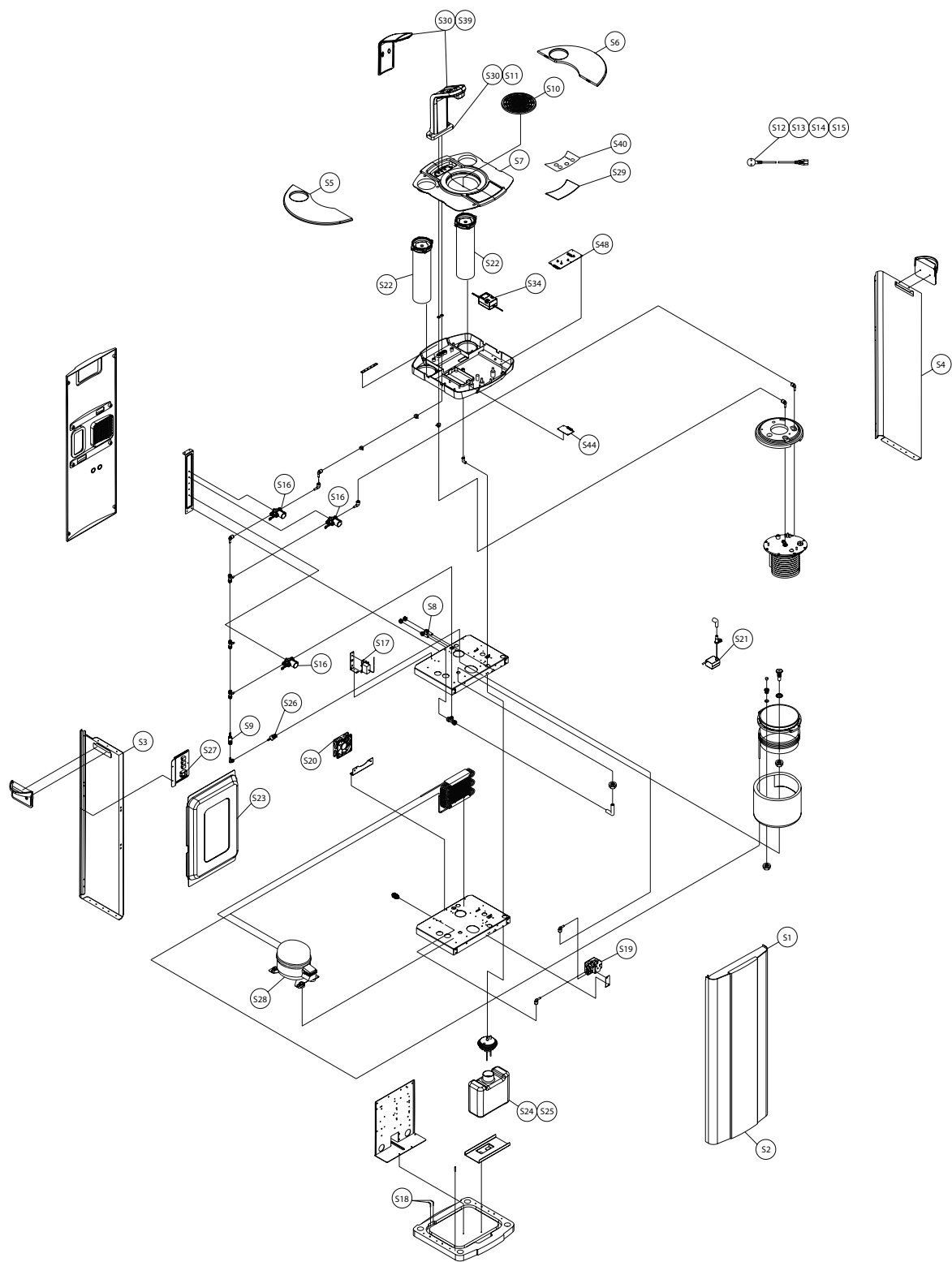
Problem/Report	Possible Cause	Suggested Action
Water lying on top edge of lower door panel and/or bottom of Cabinet.	Overflowing Drip Tray waste container.	Empty Waste Container and check drainpipe is not blocked.
Water lying in bottom of machine.	Level Sensors not working.	Check operation and replace if needed.
	Leak in supply inlet pipe work and/or filter.	Locate and repair accordingly.
	Leak from machine water pipe work fittings.	Locate and repair accordingly.
		Check pressure and fit pressure reducing valve if needed.
	DC tank overfilling.	Check level control sensor and fill valve function.

Fault Diagnosis: Miscellaneous

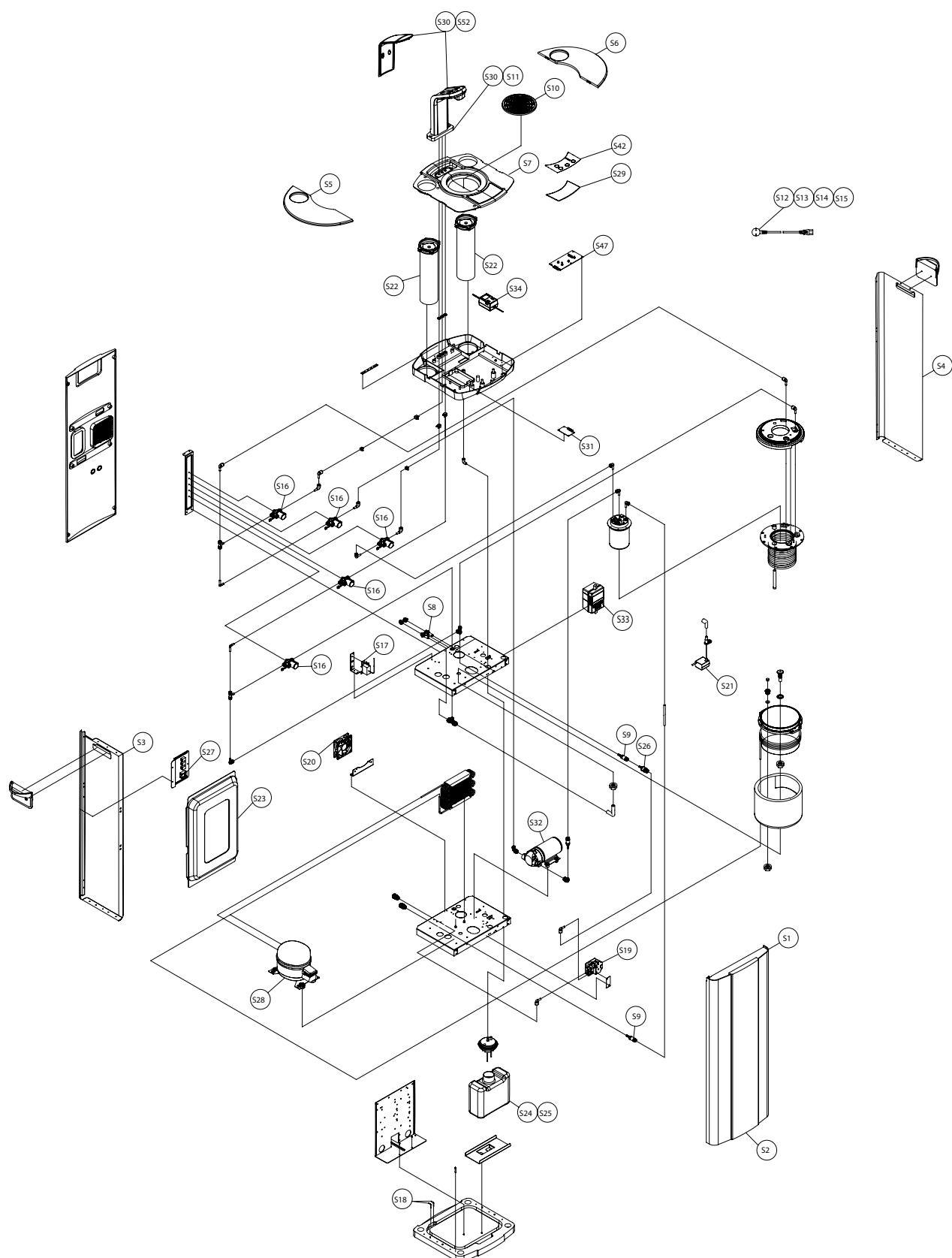
Problem/Report	Possible Cause	Suggested Action
No LED Control Lights	No electricity to Machine.	Check power supply and reconnect as necessary. (Also check out other symptoms as described separately).
	Check Fuse in IEC Socket.	Replace if necessary.
	Control PCB not working (Machine working normally otherwise).	Check & replace PCB as necessary.
Machine Shakes on Start-up	Compressor Starting.	No action needed. This is quite normal.
	Level Surface.	
	Uneven Surface.	Level up machine using adjustable feet.
	Missing Fixings.	Replace missing fixings.
Tripping out Electricity Supply	Machine in high humidity environment.	Discuss possible repositioning with customer.
	Electrical circuitry faults.	Test, identify and address accordingly. See electrical diagrams.
		Please contact technical support.
No/Inadequate Water Dispenses	Low incoming Water pressure.	Consider re-plumbing to alternative supply if possible or providing a pressure boost system.
	Low/no CO2 Pressure.	Check regulator and/or replace cylinder.
Intermittent Water Dispense From Sparkling Water Valve	Trapped air in pipe work (especially where water pressure is low or after filter change).	Hold button on to purge air out. (This could take several minutes where pressure is low).
		Use filter function if available.
	Button not being pressed enough.	Press button firmly N.B. This could be caused by a surrounding cold environment making the action stiffer.
	Control PCB not working.	Check & replace as necessary.
Slow but Continuous Water Dispense From Hot Water Valve.	Limescale build-up inside Hot Water Tank/Hot Water Pump/Hot Water Dispense Pipework.	Replace Hot Water Tank/Hot Water Pump/Hot Water Dispense Pipework, as necessary.
	Hot Water Pump not working.	Check & replace as necessary.
Intermittent Water Dispense & Hammering Noise	Fluctuating mains water pressure situation.	Contact Technical Support regarding special replacement washers available.
Continuous Water Dispense	Button jammed on/ not working.	Replace Control PCB and or/ button Panel as needed.
	Debris blocking hole in diaphragm washer.	Dismantle Valve and clean out.
	Solenoid valve not working.	Check valve and replace if needed.

Expolded Diagrams & Parts List

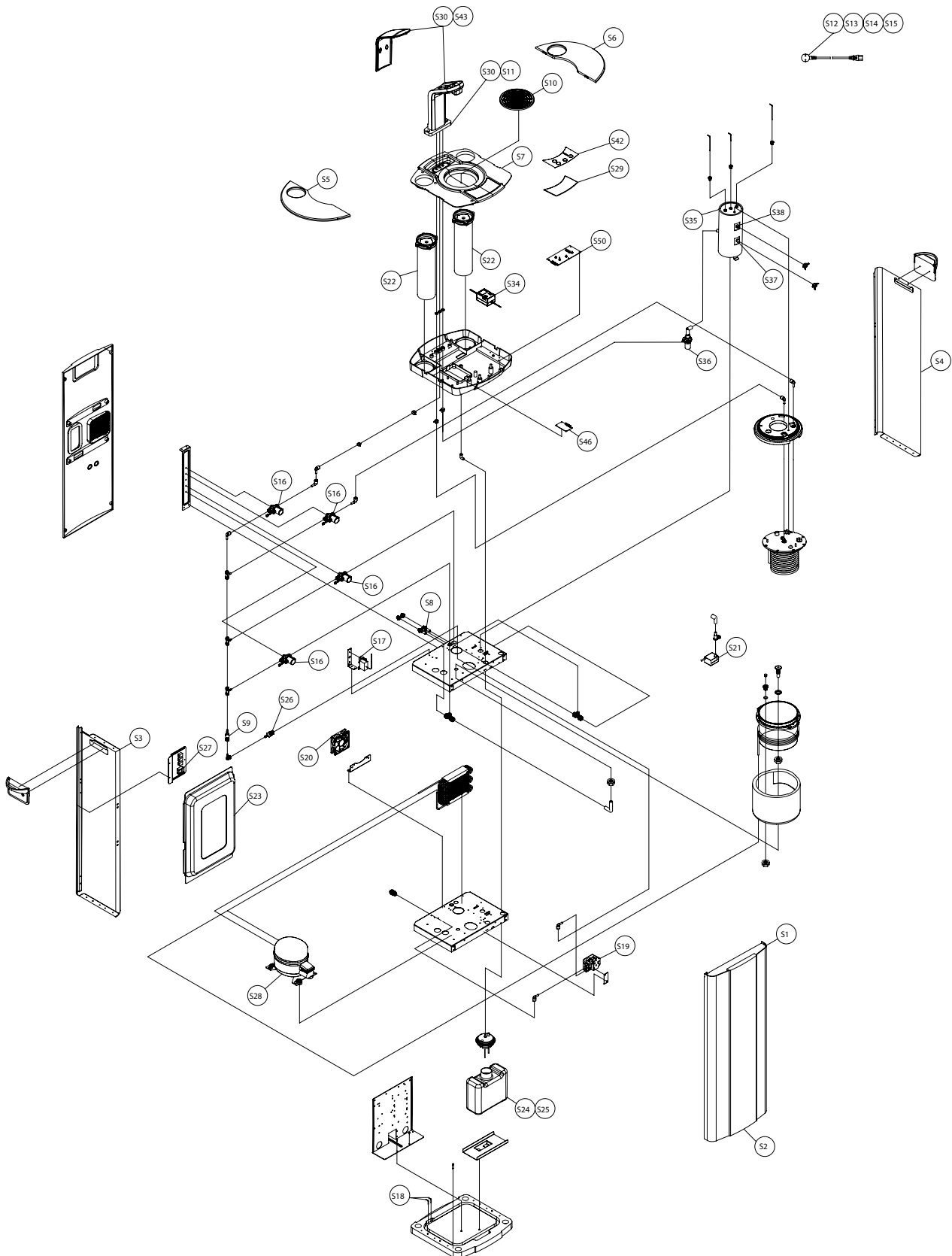
Chilled & Ambient Exploded Diagram



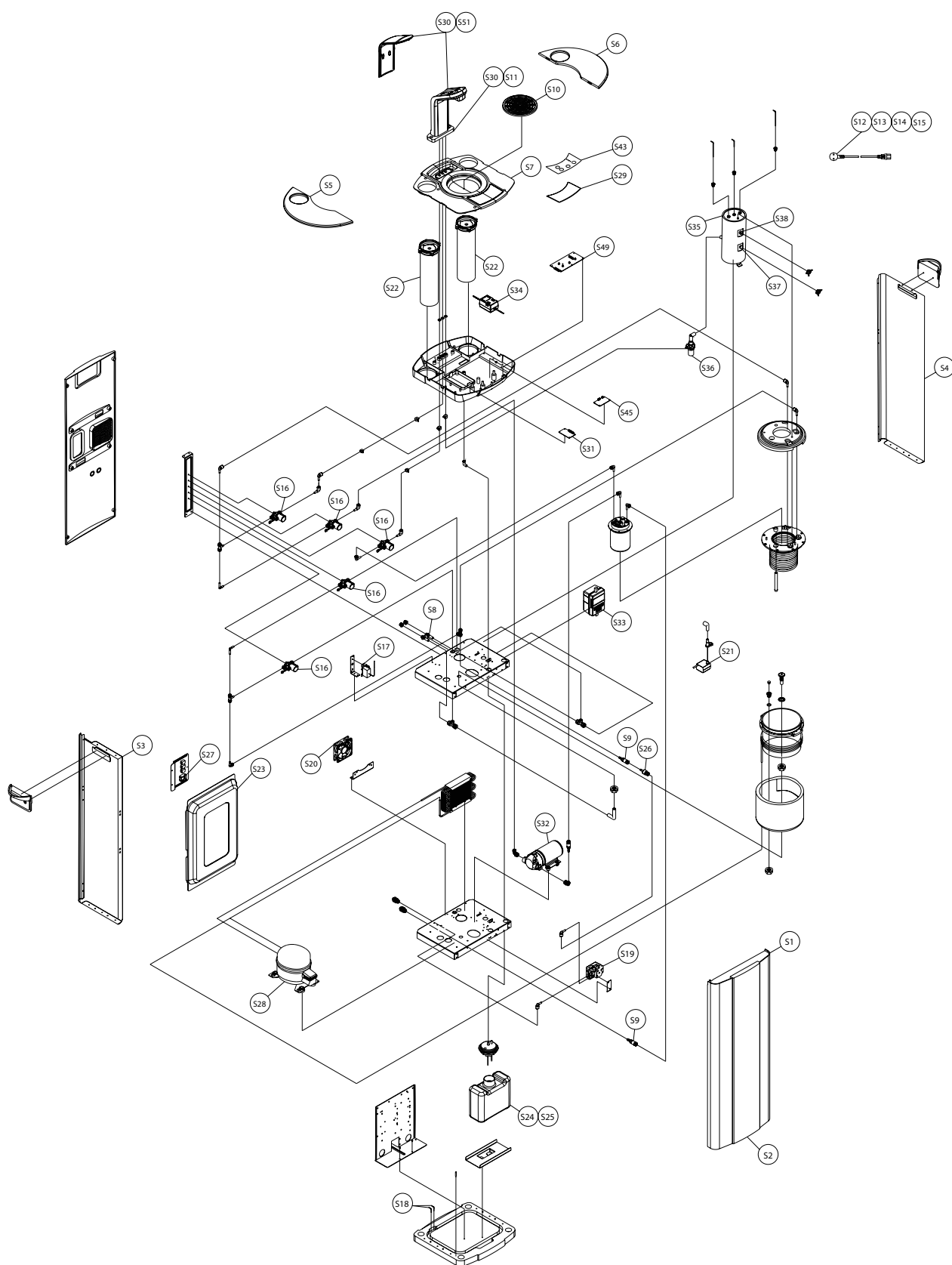
Chilled, Ambient & Sparkling Exploded Diagram



Chilled, Ambient & Hot Exploded Diagram



Chilled, Hot & Sparkling Exploded Diagram



Parts List

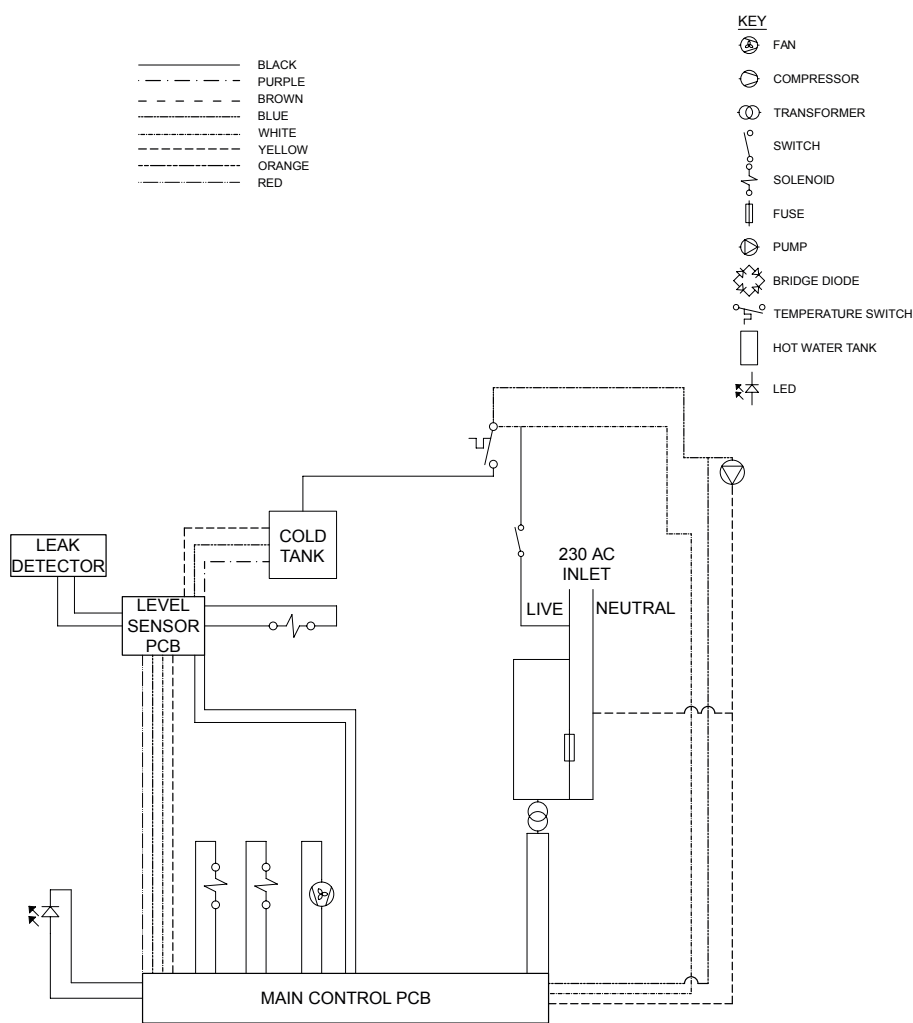
Diagram Ref:	Description	Quantity				Borg & Overstrom Part No	Engineer Service Parts
		Chilled & Ambient	Chilled, Ambient & Sparkling	Chilled, Ambient & Hot	Chilled, Hot & Sparkling		
S1	Door Panel (Shell only)	1	1	1	1	120515	
S2	Door Panel Infill	1	1	1	1	120521	
S3	Side Panel - Left	1	1	1	1	121515	
S4	Side Panel - Right	1	1	1	1	121516	
S5	Left Top Panel Cover Plate	1	1	1	1	123155	
S6	Right Top Panel Cover Plate	1	1	1	1	123156	
S7	Upper Top Panel	1	1	1	1	123154	
S8	2-Port Drainage Outlet	1	1	1	1	131426	
S9	1/4" PF x 1/4" Stem Single Check Valve	1	2	1	2	132448	*
S10	Waste Drain Grill	1	1	1	1	145015	
S11	Faucet LED Assembly - 4B (≥1404)	1	1	1	1	171247	
S12	IEC Power Cord set - Danish	1	1	1	1	172144	
S13	IEC Power Cord set - Schuko/EURO	1	1	1	1	172148	
S14	IEC Power Cord set - UK	1	1	1	1	172152	
S15	IEC Power Cord set - Swiss	1	1	1	1	852108	
S16	Solenoid Valve	3	5	4	5	173241	*
S17	Cold Thermostat	1	1	1	1	173267	*
S18	Leak Detector Probe	2	2	2	2	173274	*
S19	Leak Detector Module	1	1	1	1	173277	*
S20	Fan	1	1	1	1	174352	*
S21	DC Pump	1	1	1	1	175363	*
S22	Cup Dispenser Tube Set	2	2	2	2	184565	
S23	Inner Front Cover	1	1	1	1	184602	
S24	Waste Water Container (2 ltr)	1	1	1	1	193165	
S25	Waste Water Container (Optional 10ltr)	1	1	1	1	193187	
S26	Grit Filter	1	1	1	1	194121	
S27	IEC Fuse	1	1	1	1	174323	
S28	Compressor Relay Set	1	1	1	1	172231	
S29	Control Button Membrane Under Liner	1	1	1	1	191175	
S30	Faucet LED Assembly - 6B	1	1	1	1	171244	
S31	DCS Level Control Board	0	1	0	1	171242	*
S32	48vDC Carbonation Pump	0	1	0	1	174380	
S33	48vDC Carbonation Pump PSU	0	1	0	1	174385	
S34	24vDC PSU	1	1	1	1	174377	
S35	Hot Water Tank	0	0	1	1	166982	*

Parts List Continued

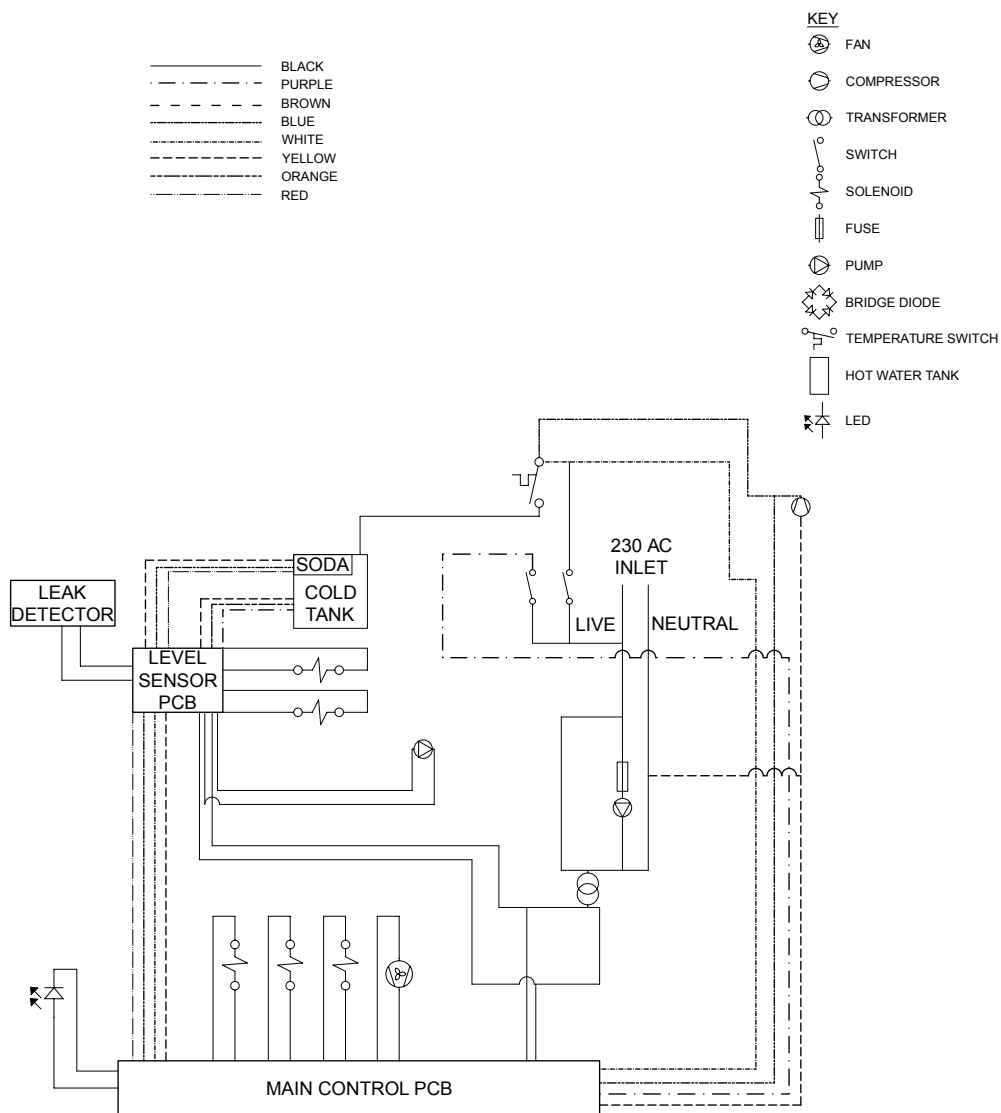
Diagram Ref:	Description	Quantity				Borg & Overstrom Part No	Engineer Service Parts
		Chilled & Ambient	Chilled, Ambient & Sparkling	Chilled, Ambient & Hot	Chilled, Hot & Sparkling		
S36	Hot Water Pump Assembly	0	0	1	1	174370	*
S37	92C Temperature Sensor	0	0	1	1	173265	*
S38	105C Safety Temperature Cut-out Sensor	0	0	1	1	173255	*
S39	DCA/H Faucet Assembly	1	0	1	0	145011	
S40	DCA Control Button Membrane	1	0	0	0	191171	
S41	DCHA Control Button Membrane	0	1	0	0	191172	
S42	DCAS Control Button Membrane	0	0	1	0	191173	
S43	DCHS Control Button Membrane	0	0	0	1	191174	
S44	DC Level Control Board	1	0	0	0	171241	*
S45	H Level Control Board	0	0	0	1	171249	*
S46	DCH Level Control Board	0	0	1	0	171243	*
S47	DCAS Main Control Board	0	1	0	0	171236	*
S48	DCA Main Control Board	1	0	0	0	171235	*
S49	DCHS Main Control Board	0	0	0	1	171240	*
S50	DCAH Main Control Board	0	0	1	0	171239	*
S51	DCHS Faucet Assembly	0	0	0	1	145013	
S52	DCAS Faucet Assembly	0	1	0	0	145012	

Technical Information

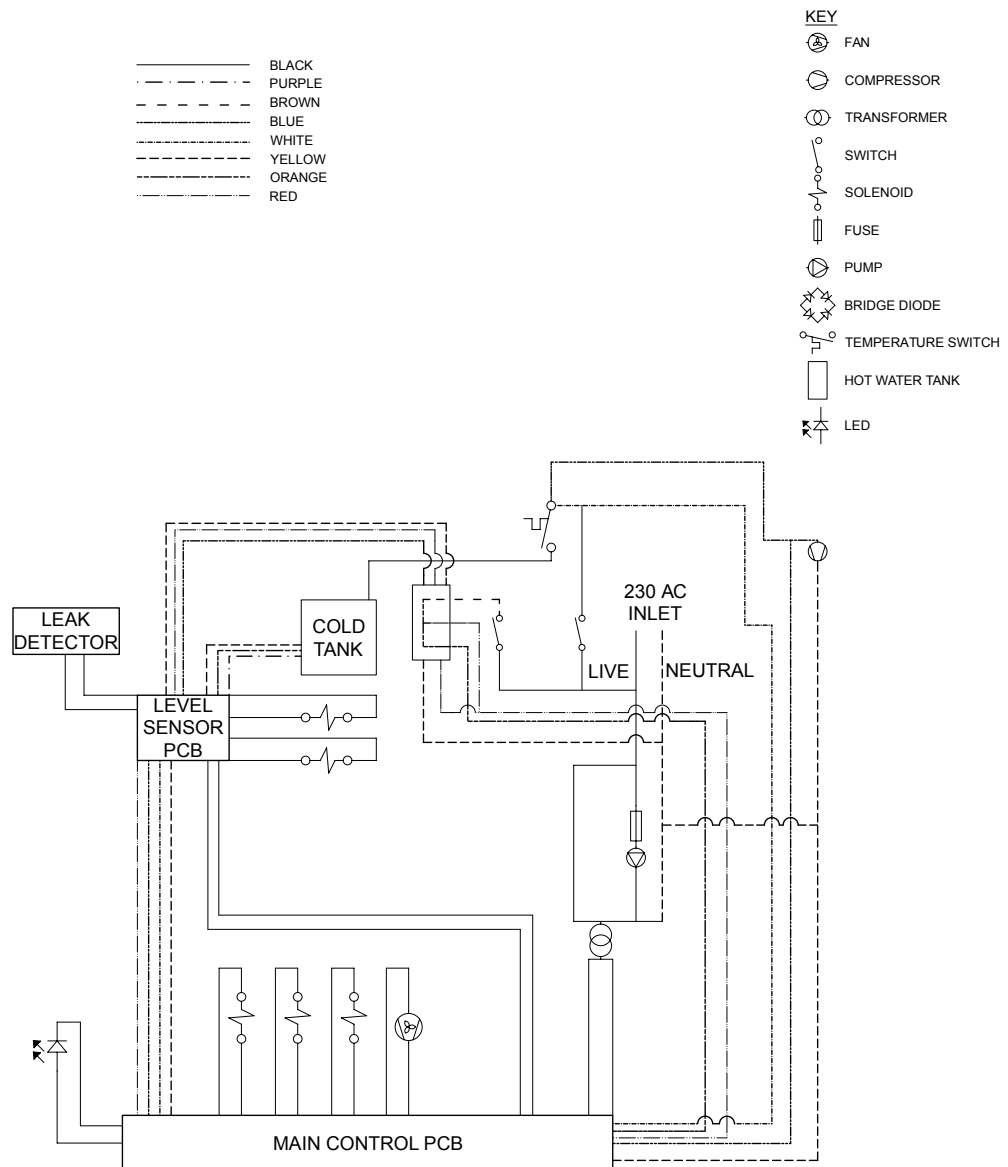
Chilled & Ambient Electrical Circuit Diagram



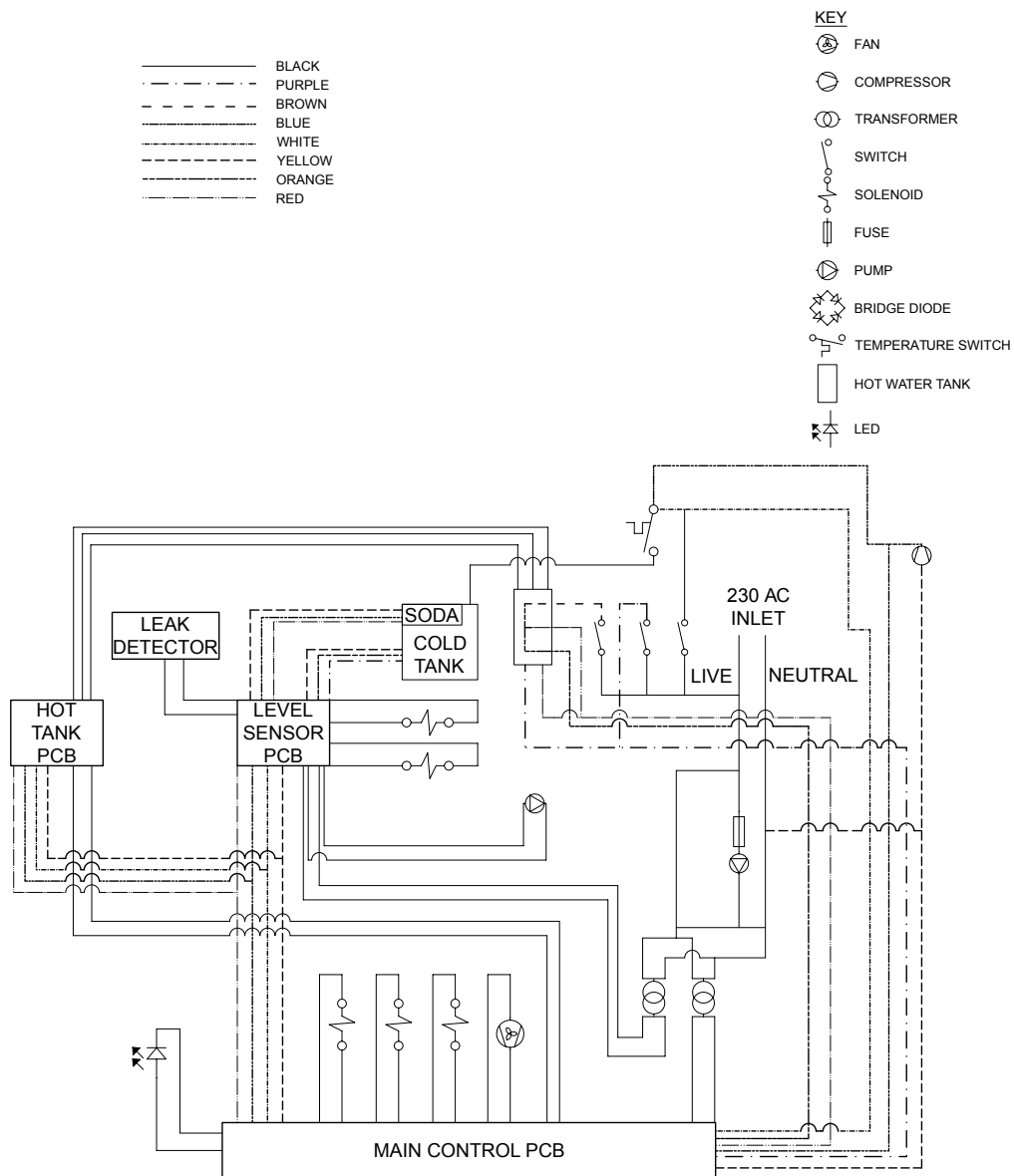
Chilled, Ambient & Sparkling Electrical Circuit Diagram



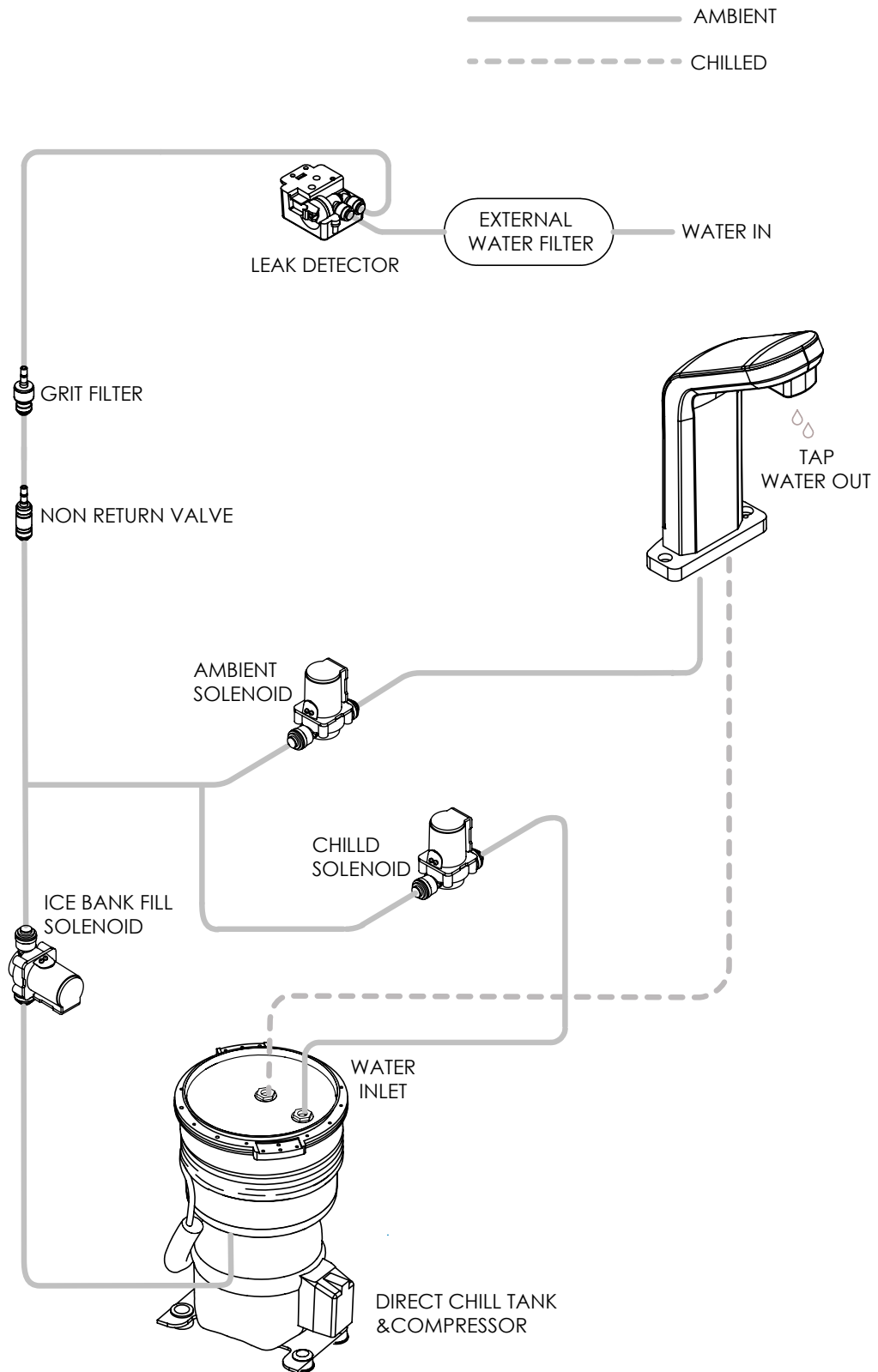
Chilled, Ambient & Hot Electrical Circuit Diagram



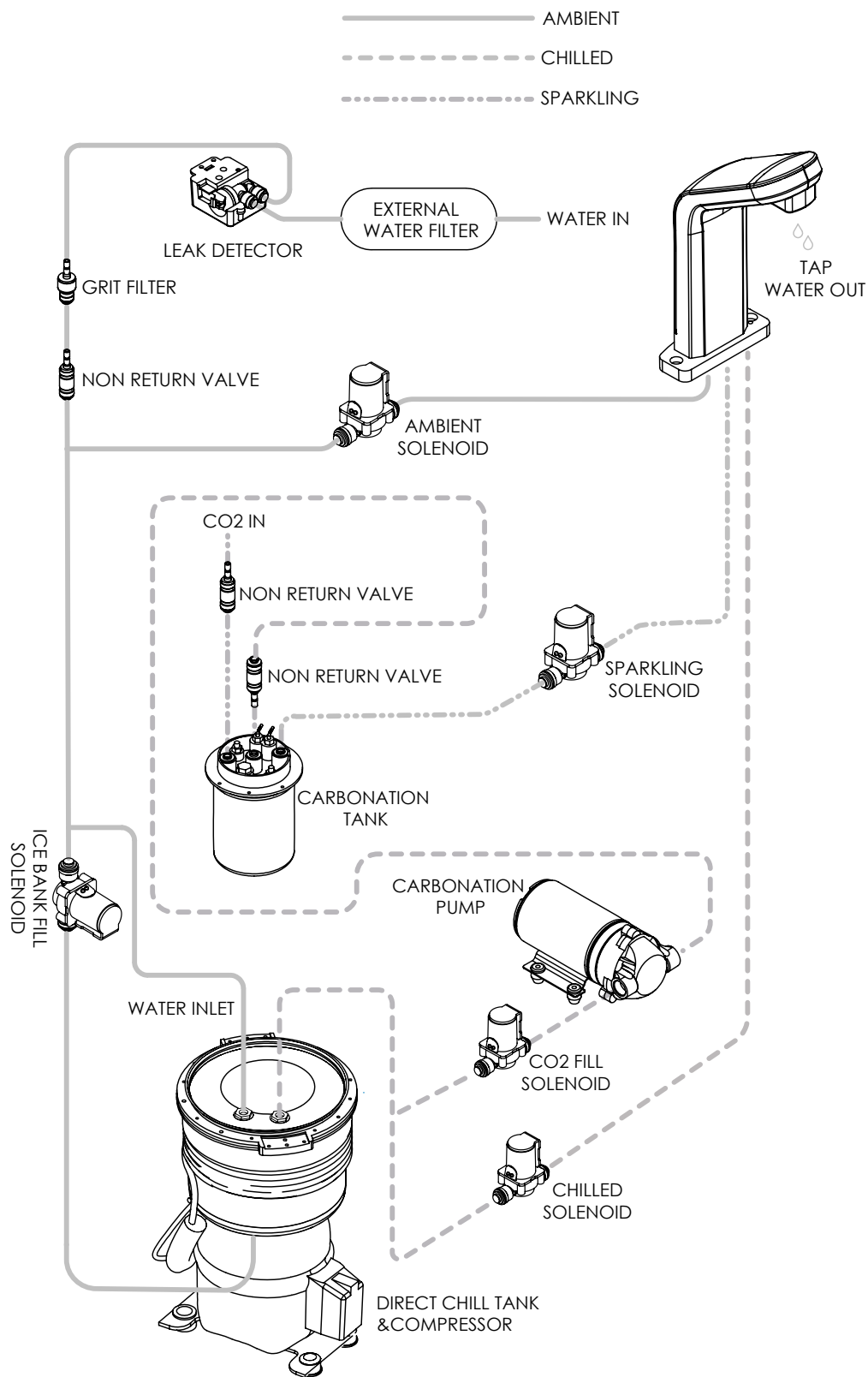
Chilled, Hot & Sparkling Electrical Circuit Diagram



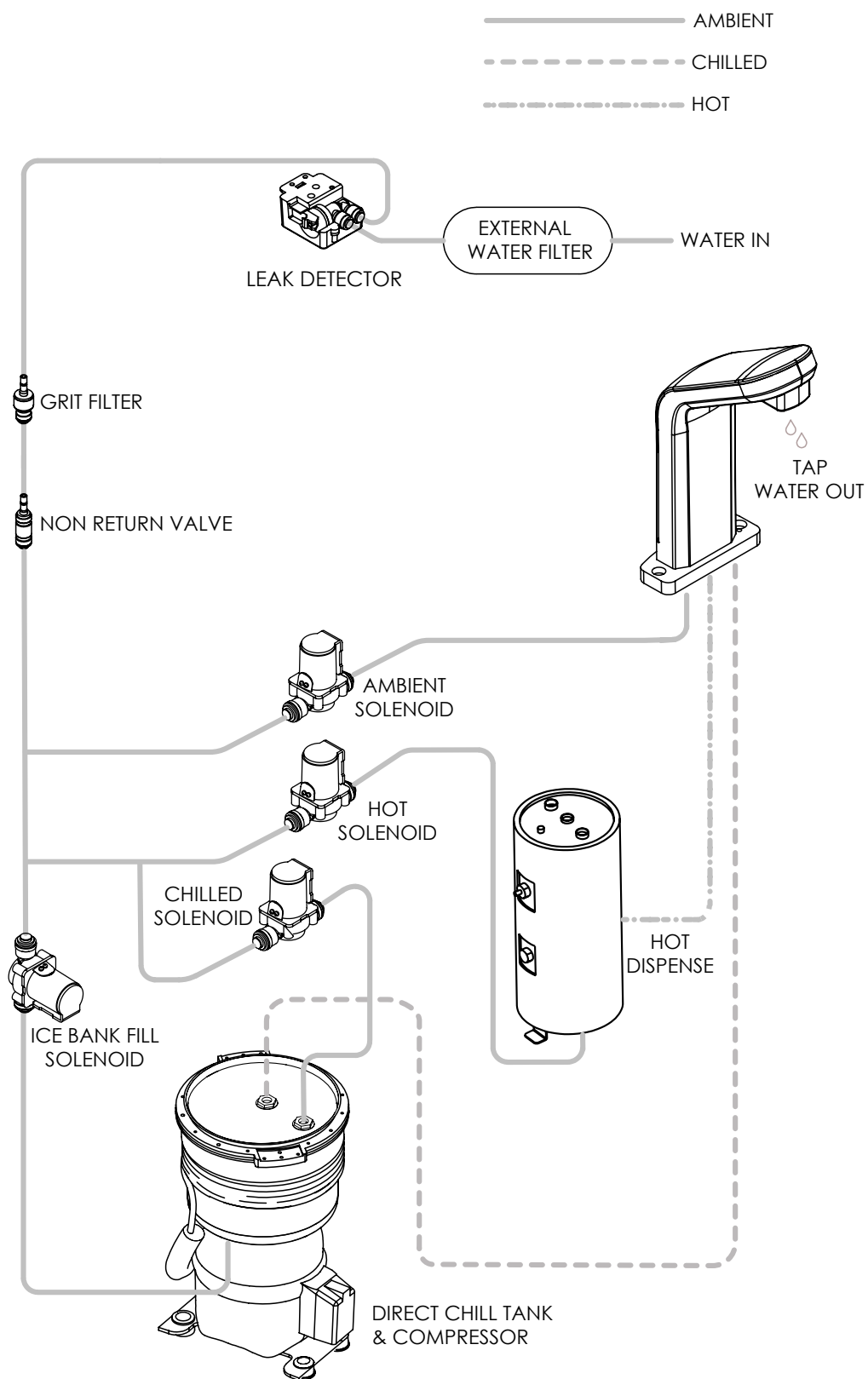
Chilled & Ambient Water Pathway Diagram



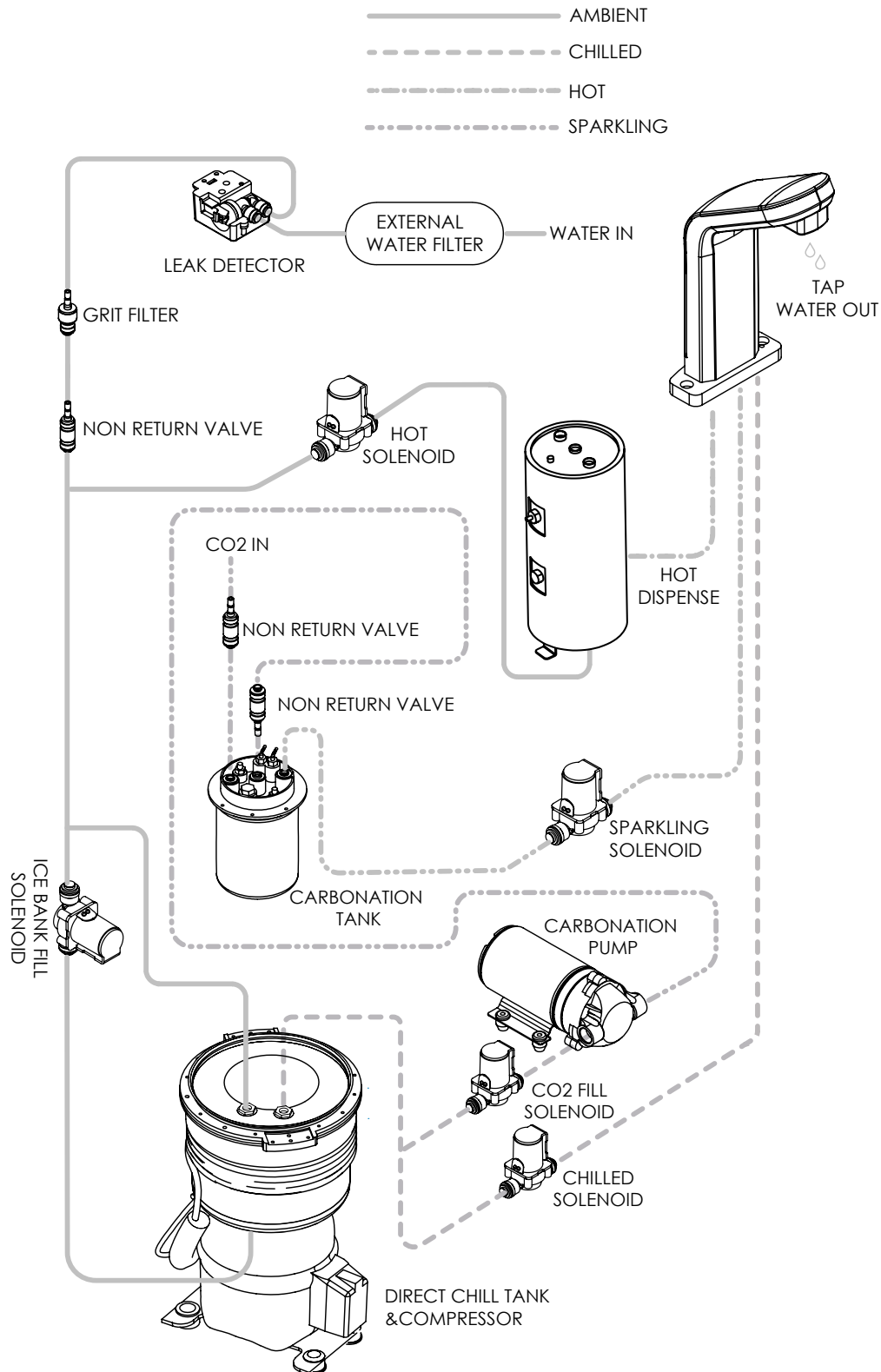
Chilled, Ambient & Sparkling Water Pathway Diagram



Chilled, Ambient & Hot Electrical Circuit Diagram



Chilled, Hot & Sparkling Water Pathway Diagram



Specification

COOLING SYSTEM	All Models	High efficiency compression system with capillary control. Premium quality long life hermetic compressor. Compact internal condenser – fan assisted for greater efficiency. Environmentally friendly R134A refrigerant. 3.5 litre insulated stainless steel chiller tank with level control containing stainless steel cold water direct chill coil. Thermostatically controlled chilled water temperature. Stainless steel carbonator tank with independent level control fitted inside coil. High capacity, low voltage diaphragm inlet pump.
HEATING SYSTEM	Chilled, Ambient & Hot	High efficiency compression system with capillary control. Premium quality long life hermetic compressor. Compact internal condenser – fan assisted for greater efficiency. Environmentally friendly R134A refrigerant. 3.5 litre insulated stainless steel chiller tank with level control containing stainless steel cold water direct chill coil. Thermostatically controlled chilled water temperature. 1.75lt stainless steel hot water tank with thermostatic temperature control (92C max), insulated for energy conservation.
	Chilled, Hot & Sparkling	High efficiency compression system with capillary control. Premium quality long life hermetic compressor. Compact internal condenser – fan assisted for greater efficiency. Environmentally friendly R134A refrigerant. 3.5 litre insulated stainless steel chiller tank with level control containing stainless steel cold water direct chill coil. Thermostatically controlled chilled water temperature. Stainless steel carbonator tank with independent level control fitted inside coil and high capacity, low voltage diaphragm inlet pump. 1.75lt stainless steel hot water tank with thermostatic temperature control (92C max), insulated for energy conservation.
COLD TEMPRATURE		2°C to 11°C
HOT TEMPRATURE		92°C Max
THROUGHPUT PER HOUR		18 litres cold < 12°C / 16 litres sparkling <12°C.
DISPENSE		Ergonomically designed and situated light touch sensitive controls.
MAXIMUM RUNNING POWER CONSUMPTION	Chilled & Ambient	100 watt
	Chilled, Ambient & Sparkling	140 watt
	Chilled, Ambient & Hot	900 watt
	Chilled, Hot & Sparkling	940 watt
POWER SUPPLY		IEC power socket.
WATER CONNECTION		1/4 inch quick connection.
CO2 CONNECTION		1/4 inch quick connection.
COUNTERTOP DIMENSIONS		(w x d x h) 520 x 410 x 1010mm
WEIGHTS	Chilled & Ambient	27.0kg
	Chilled, Ambient & Sparkling	30.9kg
	Chilled, Ambient & Hot	27.8kg
	Chilled, Hot & Sparkling	31.6kg